

**IN THE CLAIMS:**

Please amend the claims as follows:

Claim 1 (Currently Amended): ~~An information processing method comprising the step of carrying out parallel information processing between a plurality of information groups each comprising a plurality of information items;~~

wherein a plurality of data items constituting data group information are arranged three-dimensionally; and

A method of performing parallel information processing between a plurality of information groups each comprising a plurality of information items, said method comprising the steps of:

three-dimensionally arranging a plurality of data items constituting data group information; and

wherein performing a data correlation calculation between a plurality of thus these three-dimensionally arranged information groups is carried out by utilizing based on an arrangement characteristic thereof.

Claim 2 (Original): An information processing method according to claim 1, wherein said data group information is arranged as a hologram image; and wherein an image correlation calculation is carried out between hologram images.

Claim 3 (Currently Amended): An information processing system for processing information between a plurality of information groups each comprising a plurality of information items in parallel,

said system comprising:

arranging means for three-dimensionally arranging a plurality of data items constituting data group information ~~into a predetermined form~~; and

arithmetic means for performing carrying out a data correlation calculation between a plurality of these three-dimensionally arranged information groups arranged based on an arrangement characteristic thereof by said arranging means.

Claim 4 (Original): An information processing system according to claim 3, wherein said arranging means arranges said data items as a predetermined hologram image; and wherein said arithmetic means carries out an image correlation calculation between a plurality of hologram images so as to perform said data correlation calculation.

Claim 5 (Original): An information processing system according to claim 4, wherein said arithmetic means projects a hologram image representing each data group and optically carries out said image correlation calculation.

Claim 6 (Previously Presented): An information processing system according to claim 4, further comprising hologram image preparing means for forming said predetermined hologram image.